

Lectures: (a) The general structure, physiology, and life-history of Amoeba, Paramaecium, Monocystis, Obelia, Lumbricus, Scyllium, Rana and Lepus. (b) The general structure, physiology, and life-history of Hiematococcus, Spirogyra, Pythium, Saccharomyces, and Bacteria. The reproduction and life-history of the Fern.

The Anatomy, histology, and development of the vegetative organs of the dicotyledonous plant as illustrated by a herbaceous and a woody type. The structure of the flower as illustrated by that of Liliium, Ranunculus, and Pisum. Reproduction, pollination, fertilisation, and development of the seed and fruit.

(b) The cell, its structure and life-history in plants and animals. The elements of animal histology as illustrated by the study of the tissues of a vertebrate animal (including epithelia, blood, and connective, skeletal, muscular, and nervous tissues).

(c) The elementary facts concerning assimilation and metabolism, respiration, excretion, growth, irritability and movement, and reproduction in plants and animals. (Candidates will be required to show an acquaintance with the experimental methods employed in elementary plant physiology).

(d) Sexual and asexual reproduction, Parthenogenesis. The history and characters of the germ cells. The elements of vertebrate embryology, with special reference to (a) cleavage and origin of the germ-layers in Amphioxus, Gallus, and Lepus.

(b) formation of the foetal membranes in Gallus and Lepus.

(c) the outlines of organogeny as illustrated by the study of Gallus as far as the end of the third day of incubation.

(e) The elementary facts relating to heredity, variation, and evolution.

(f) The phenomena of saprophytism, as illustrated by Mucor, and of parasitism as illustrated by Pythium, Bacteria, Monocystis, Malarial parasite and Taenia.

#### PRACTICAL COURSE

The course must enable the student to show a practical acquaintance with the general structure of the organisms included under (a) with the tissues included under (b), and with their preparation for microscopic examination, and with the development stages of Gallus up to the end of the third day.

#### REVENUE SECRETARIAT.

Well Boring Section. (7)

Para 11 of Government Order No. 49-632-D, dated 26th December 1923, sanctioning a sum of Rs. 1,760, for meeting the expenditure connected with the staff to be entertained in the Agricultural Department, for four months for rendering necessary assistance to raiyats to repair the existing irrigation wells and to sink new ones and observing that the question of starting a larger campaign for the sinking of irrigation wells with the aid of improved appliances and technical advice is under the active consideration of Government.

2. Correspondence ending with letter No. B. 8665, dated 28th December 1923, from the Chief Engineer for Irrigation, furnishing his opinion in the matter of the proposal to secure the services of a Well Boring Expert.

3. Correspondence ending with letter No. R. O. C. 997, B. C. 303-67, dated 16th March 1924, from the Director of Agriculture, representing the urgent need for a well-boring and sinking section in the Agricultural Department and requesting sanction to a scheme for organizing such a section involving an expenditure of Rs. 48,332 for the year 1924-25.

4. Further correspondence ending with letter No. R. O. C. 977—H. C., dated 2nd June 1924, from the Director of Agriculture, submitting revised proposals involving an expenditure of Rs. 25,000 in connection with the establishment of a well-boring section.

ORDER No. I. C. 7679-742—A. & E. 132-23-7, DATED CAMP MYSORE, 18TH JUNE 1924.

The question of starting a large and systematic campaign for the sinking of irrigation wells with the aid of improved appliances and of affording technical advice to persons who sink wells for irrigation purposes and drinking water, has been under the consideration of Government for some time past. The Director of Agriculture who had been requested to submit a suitable scheme has reported that the present state of water-supply in regard

to a very large proportion of tanks being unsatisfactory and inadequate, it has to be supplemented by sinking subsidiary wells on a large scale and that therefore it is necessary to organize a well-boring section in the Agricultural Department. He has accordingly sent up the following proposals involving an expenditure of about Rs. 25,000 for 1924-25:

(i) That in addition to the two Musto's Boring plants in the Agricultural Department, two more plants in charge of the Deputy Commissioners of Tanjore and Coimbatore may be handed over to the Agricultural Department and that as some of the plants are much out of order one of them may be scrapped and its parts made available for the repair of the other three.

(ii) That the undermentioned machinery be purchased at the cost of about Rs. 4,000:

Purchase of 2 Meyer Pumps, 1,500  
Two portable pumping outfits to empty wells in course of

(iii) That the services of a Well Boring Engineer on Rs. 850 per month may be secured.

(iv) That a sum of Rs. 14,542 to meet the salary of the Well Boring Engineer and the establishment (Office and Technical) travelling allowance and contingencies as per details below be sanctioned:

Officer's pay	4,200
Boring Engineer on Rs. 850 per mensem	10,200
Office establishment—	
1 Clerk on Rs. 60 per mensem	720
1 Store clerk 40	480
1 Station duty man Rs. 25 per mensem	300
1 Peon at Rs. 12 per mensem	144
Travelling allowance to officer and establishment	1,000
Contingencies	1,500
Technical establishment—	
1 Boring Inspector on Rs. 100 per mensem	1,200
1 Boring Operator for power machine (only) the cost will be debited to this work	450
3 Boring Operators on Rs. 50 each per mensem for hand power machine	1,800
3 Engine Drivers at Rs. 40 each (one of the cost of 1 Driver will be charged to other works)	2,000
1 Smith on Rs. 75 per mensem	900
1 Helper on Rs. 30	360

REVENUE SECRETARIAT Rs. 14,542

(v) That Rs. 8,000 for fitting up and putting in order the aforesaid Musto's Boring Plants and Rs. 8,300 being running charges for the Musto's Boring Plants, Calyx Power Drills, Two Meyers Pumps and two pumping sets above referred to, may be sanctioned.

The Government are pleased to sanction the proposals of the Director of Agriculture temporarily for a period of one year with effect from 1st July 1924 and necessary provision for the expenditure of Rs. 25,000 will be made in the Budget for the year 1924-25 for this purpose.

The Director of Agriculture is requested to submit proposals as to the charges to be levied from private persons or Municipalities or District Boards for whose benefit and on whose behalf wells might be sunk by the organization sanctioned in this order.

The Director of Agriculture should obtain monthly progress reports from the Special Officer and submit them to Government with his remarks.

K. V. ANANTARAMAN,  
Offg. Secretary to Government,  
Revenue Department.